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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,013	10/25/2000	Vincent P. Stanton JR.	030586.0015.UTL1	4545

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EXAMINER	
MYERS, CARLA J	

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/697,013	STANTON, VINCENT P.	
	Examiner	Art Unit	
	Carla Myers	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 May 2003* .

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-56* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Election/Restrictions

1. Acknowledgement is made of Applicants election without traverse of Group I, claims 1-25, in the response of May 28, 2003. However, upon further reconsideration, the previous restriction requirement is withdrawn and a new restriction requirement is set forth below.

2. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 1-16 are drawn to methods for determining an ApoE genotype, classified in Class 435, subclass 6.

II. Claims 17-25, drawn to methods for determining a haplotype for ApoE in an individual, classified in Class 435, subclass 6.

III. Claim 26 is drawn to methods for classifying ApoE haplotypes, classified in Class 435, subclass 6.

IV. Claims 27-40 are drawn to methods for determining risk of disease, classified in Class 435, subclass 6.

V. Claims 41-49 are drawn to methods for selecting treatment for a disease, classified in Class 435, subclass 6.

VI. Claims 50-51 are drawn to methods for determining whether a biological sample is from an individual, classified in Class 435, subclass 6.

VII. Claims 52-55 are drawn to methods for determining whether an ApoE haplotype is associated with a disease, classified in Class 435, subclass 6.

VIII. Claim 56 is drawn to methods for determining whether an ApoE haplotype is associated with a pharmacological parameter, classified in Class 435, subclass 6.

3. The inventions are distinct, each from the other because of the following reasons:

Inventions I-VIII are drawn to patentably distinct methods which involve different method steps, include different reagents and have different objectives. In particular, the methods of invention I are inclusive of methods for determining the sequence of the ApoE gene to accomplish the objective of determining the genotype of an individual. The method of invention II requires examining at least two polymorphic sites of the ApoE sequence and identifying the presence of a haplotype, such that the method requires detecting the combination of particular polymorphic sites wherein the combination of polymorphic sites constitute a haploytpe. The methods of invention III require determining ApoE haplotypes for a plurality of individuals and determining the sequence similarity of the haplotypes to accomplish the objective of classifying ApoE haplotypes based on sequence similarities. The methods of invention IV involve determining the ApoE haplotype of an individual and determining whether that individual is at an increased risk of developing or having a disease such as coronary heart disease or Alzheimer's disease. The methods of invention V involve determining the ApoE haplotype of an individual suffering from a disease, determining an ApoE haplotype associated with a favorable clinical prognosis with a particular therapy and selecting a therapy or administering a therapy based on the ApoE haplotype. The methods of invention VI require determining the nucleotide sequence at a plurality of ApoE polymorphic sites in a test DNA sample and in a DNA sample from a patient and determining whether the nucleotides at the polymorphic site are the same or different in order to accomplish the objective of determining whether a test biological sample was

from said individual. The methods of invention VII require determining ApoE haplotypes for each individual in a set of individuals, dividing the individuals in the sets into 2 or more groups based on the ApoE haplotypes and determining whether the individuals in the groups differ with respect to incidence, prevalence, severity or progression of disease. The methods of invention VIII require measuring a pharmacological parameter of cells for at least one individual with an ApoE haplotype, measuring the same pharmacological parameter in cells from a different individual and comparing the resulting measurements in order to accomplish the objective of determining whether an ApoE haplotype is associated with a pharmacological parameter. The methods of invention I-VIII are novel and unobvious over each other.

4. **Requirement to Elect a Polymorphic Site or Combination of Polymorphic Sites**

In addition, with respect to group I, Applicant is required to elect a single polymorphism selected from the group of polymorphisms set forth in claim 2. With respect to group II, Applicant is required to elect a single set of polymorphisms selected from the group of polymorphisms set forth in claim 19. Each of the polymorphisms set forth in the claims is considered to be distinct from one another, since each nucleotide variation occurs at a distinct location within the ApoE gene, each polymorphism has a distinct structural identity and each polymorphism has a distinct effect on the function of the ApoE gene and the protein encoded thereby. Furthermore, each combination of polymorphisms is distinct from one another in that particular combinations of polymorphisms are associated with distinct functions of the ApoE gene and are associated with risk of distinct diseases. For example, a polymorphism at position

16541 of the ApoE gene, would not render a polymorphism at position 16747 of the ApoE gene obvious. Accordingly, in the absence of evidence to the contrary, each polymorphism is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 CFR 1.14. It is noted that the claims that are drawn generically to detecting any ApoE polymorphism or any combination of ApoE polymorphisms will be examined for their entire scope, i.e. as including any variation in the ApoE nucleic acid. However, the claims which recite specific polymorphic sites, will be examined for only the elected polymorphic site or combination of polymorphic sites.

Applicant is advised that this is a restriction requirement and should **not** be construed as an election of species.

5. Because these inventions are distinct for the reasons given above and have acquired a different status in the art as demonstrated by their recognized divergent subject matter and because inventions I-VII require different searches that are not co-extensive, examination of these distinct inventions would pose a serious burden on the examiner and therefore restriction for examination purposes as indicated is proper.

6. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carla Myers whose telephone number is (703) 308-2199. The examiner can normally be reached on Monday-Thursday from 6:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (703)-308-1119. Papers related to this application may be faxed to Group 1634 via the PTO Fax Center using the fax number (703)-872-9306 or (703)-872-9307 (after final).

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0196.

Carla Myers
August 21, 2003

CARLA J. MYERS
PRIMARY EXAMINER

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